Medi-Cal POS
Network Telecommunications Interface Standards
Third Party Vendors
(Draft)

California Department of Health Services
and Electronic Data Systems
Version 1.0 (Draft)

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Section 1 - Overview

This document contains the specifications for dial-up and leased line telecommunications within the Medi-Cal Point of Service (POS) network. Formats for the data transactions and responses supported within this network are detailed in the Medi-Cal transaction vendor companion guides, which can be found on the Medi-Cal Web site at **www.medi-cal.ca.gov** (click the "HIPAA Update" link, then the "ASC X12N Version 4010A1 Companion Guides and NCPDP Technical Specifications" link). Section 2 of this document, *Supported Transactions*, lists these transaction suites and their associated companion guides. The POS network supports the following online real-time transactions:

- Subscriber Eligibility Verification
- Share of Cost (SOC) / Spend Down Clearance
- Medi-Service Reservations
- Pharmacy Drug Claims
- Pharmacy Prior Authorizations
- Family Planning, Access, Care and Treatment (Family PACT) Actions
- Capture of X12N 837 Professional Services Claims
- Child Health and Disability Prevention (CHDP) Program Gateway Actions

Section 2 - Supported Transactions

The format for transactions submitted through the Medi-Cal Point of Service (POS) network is based on nationally recognized standards, the National Council for Prescription Drug Programs (NCPDP) and the American National Standards Institute (ANSI). The following table details the various Medi-Cal transactions that use these formats.

Table 1 – Supported Medi-Cal Transactions

Transaction	Standard Format
CHDP Gateway	ANSI X12.834, 271
Eligibility Inquiry/Response	ANSI X12.270/271
Family PACT	ANSI X12.834, 864, 271
Medi-Service Reservation Request/Response	ANSI X12.270/271
Medi-Service Reservation Reversal/Response	ANSI X12.270/271
Share of Cost Clearance Request/Response	ANSI X12.270/271
Share of Cost Clearance Reversal/Response	ANSI X12.270/271
Pharmacy Claim - Request/Response	NCPDP V5.1
Pharmacy Claim - Reversal/Response	NCPDP V5.1
Pharmacy Prior Authorization Request Only (P4) – Request/Response	**NCPDP V5.1**
Pharmacy Prior Authorization Inquiry (P3) – Request/Response	**NCPDP V5.1**
Pharmacy Prior Authorization Reversal (P2) – Request/Response	**NCPDP V5.1**
System Suite Transactions	ANSI X12.864
837 Professional Services Claim	ANSI X12.837, 277, 271

For the specific details of these transactions, refer to the documents listed below. For information about the standards and various data values, refer to the appropriate standards documentation, which is available through the standards organizations. Section 6 of this document, *Reference Information*, contains the standards organizations' Web site addresses.

Table 2 –Medi-Cal Transactions Companion Guides

Transaction	Document Name
CHDP Gateway	Document not yet published
Eligibility, Medi-Service Reservation, Share of Cost Clearance (Spend Down)	270/271 Version 4010A1 test cases soon to be published
Family PACT	Document not yet published
Pharmacy	*Medi-Cal POS NCPDP Pharmacy Transaction Specifications Third Party Vendors (Dial-Up and Leased-Line)*
System Suite Transactions	Document not yet published
837 Professional Services Claim	Document not yet published

These publications are or will be available on the Medi-Cal Web site at **www.medi-cal.ca.gov**. Click the "HIPAA Update" link, then the "ASC X12N Version 4010A1 Companion Guides and NCPDP Technical Specifications" link.

Section 3 - Additional Transaction Control and Response Format Information

3.1 Transaction Routing Control Information

Medi-Cal has been issued an Issuer Identification Number (IIN) by the American National Standards Institute/International Standards Organization (ANSI/ISO). This number assists in routing transactions through Third Party Communication Service (TPCS) networks to the Medi-Cal processing system. The Medi-Cal IIN is **610442** and should be used in all transactions using either the ANSI or National Council for Prescription Drug Programs (NCPDP) formats. Refer to the appropriate Medi-Cal transaction vendor companion guide for the fields used to contain the Medi-Cal IIN.

The dial-up and leased-line Medi-Cal Point of Service (POS) network uses transaction routing code information in every inbound transaction. This routing code is used within the Remote Submitter Routing Identifier (RSRI) position for pharmacy transactions and the GS03 - Application Receiver's Code for all ANSI X12 transactions. Details about the RSRI routing code are provided in the *Medi-Cal POS NCPDP Pharmacy Transaction Specifications Third Party Vendors (Dial-Up and Leased-Line)* companion guide. The GS03 field format is alphanumeric and 15 bytes in length.

Table 3 - GS03 - Application Receiver's Code

GS03 - Application Receiver's Code			
Medi-Cal IIN	**Processor Code**	**Routing Code**	**Filler**
610442	(Varies)	(Varies)	(Reserved for future use)
6 Bytes	3 Bytes	3 Bytes	3 Bytes

This routing code information facilitates message routing within the Medi-Cal POS network and transaction processing systems to flexibly support various vendor-processing scenarios. The GS03 field format and values are as follows:

- The Medi-Cal IIN field must contain the value **610442**.
- The Processor Code field value depends on which Medi-Cal processor receives the claims. This field should be coded with the value **EDS**.
- The Routing Code field depends on which system receives the transaction. The following table lists allowable defined values.

Table 4 – Processor and Routing Codes

Processor Code (xxx)	Routing Code (yyy)	Purpose
EDS	Spaces	EDS - Production CICS
EDS	Zeros	HHSDC* - Special System Test CICS
EDS	213	EDS - Vendor Software Validation CICS
EDS	214	EDS - Production CICS
EDS	219	EDS - Infrastructure Update Test System

***** Health and Human Services Data Center (HHSDC)

The HHSDC and EDS network infrastructure are designed to physically isolate data traffic from the test and production systems. Leased-line connections need to have a separate logical connection to the test system(s) at HHSDC. This connection can be either Physical Unit (PU) or Logical Unit (LU). Dial-up systems use different telephone numbers to access the test and production systems.

Section 4 - Telecommunication Information

4.1 Leased-Line Communications Protocol

All leased-line connections must terminate at the Health and Human Services Data Center (HHSDC). The IBM 3270 Synchronous Data Link Control (SDLC) protocol is currently supported. This protocol is IBM's version of the International Standards Organization (ISO) High-Level Data Link Control (HDLC) standard. The IBM SDLC protocol was selected because it is widely available in a number of hardware and software products from a number of vendors. A variety of leased line speeds may be supported at the HHSDC.

The Intersystem Communication (ISC) connection between the user site and the HHSDC through a Customer Information Control System (CICS) to CICS LU Type 6.2 (APPC) session is supported. For technical information concerning ISC connections, refer to the following IBM publications:

- *CICS Intercommunication Guide* (SC34-6005) – Explanations about defining CICS ISC links
- *CICS System Definition Guide* (SC34-5988) – Guidance about implementing ISC in a CICS system

Access these guides through the IBM Web site: **www-306.ibm.com/software/htp/cics/library**.

Requests and inquiries regarding the cost of implementing leased lines, line speeds and connection procedures will be handled on a case-by-case basis. For reference information, consult section 6 of this document, *Reference Information*.

The Medi-Cal POS network currently supports the following two interfaces to leased line service providers:

1. Logical Unit 2 (LU 2). This interface uses the Systems Network Architecture (SNA) 3270 protocol to exchange data streams with third party systems. The leased line provider must preface the transaction as follows:

1	2	3	4	5	6	7
			P	0	S	L

   Where POSL is uppercase EBCDIC characters preceded by three spaces. The LU 2 response will be EBCDIC coding preceded by two spaces.

2. CICS to CICS ISC may be used by service providers whose applications are operating under the IBM CICS product. The leased-line provider will use a "POSL" transaction to communicate with the Point of Service (POS) application.

4.2 Dial-Up Communications Protocol

The dial-up network supports only the asynchronous VISA protocol in a single transaction/response mode. This protocol is described below. The dial-up network is available through the provider's public telephone service, which connects to the Medi-Cal POS network using toll-free services. To receive the telephone numbers for dial-up access, software developers must undergo a software validation process. Separate numbers will be provided for a test system and a production system. Section 5 of this document, *Software Validation Process*, further describes the software validation process.

4.2.1 Toll-Free Access

Providers can access the POS network using a primary access telephone number and a secondary access telephone number. Do the following to access the network:

1. Call the primary number.
2. If a connection is not made on the first call, hang up and redial the primary number.
3. If a connection is not made to the primary number, hang up and dial the secondary number.
4. If a connection is not made on the first call to the secondary number, hang up and redial the secondary number.
5. If no connection is made on the second call to the secondary number, hang up. The submission is unsuccessful and may be retried.

Table 5 - Data Flows

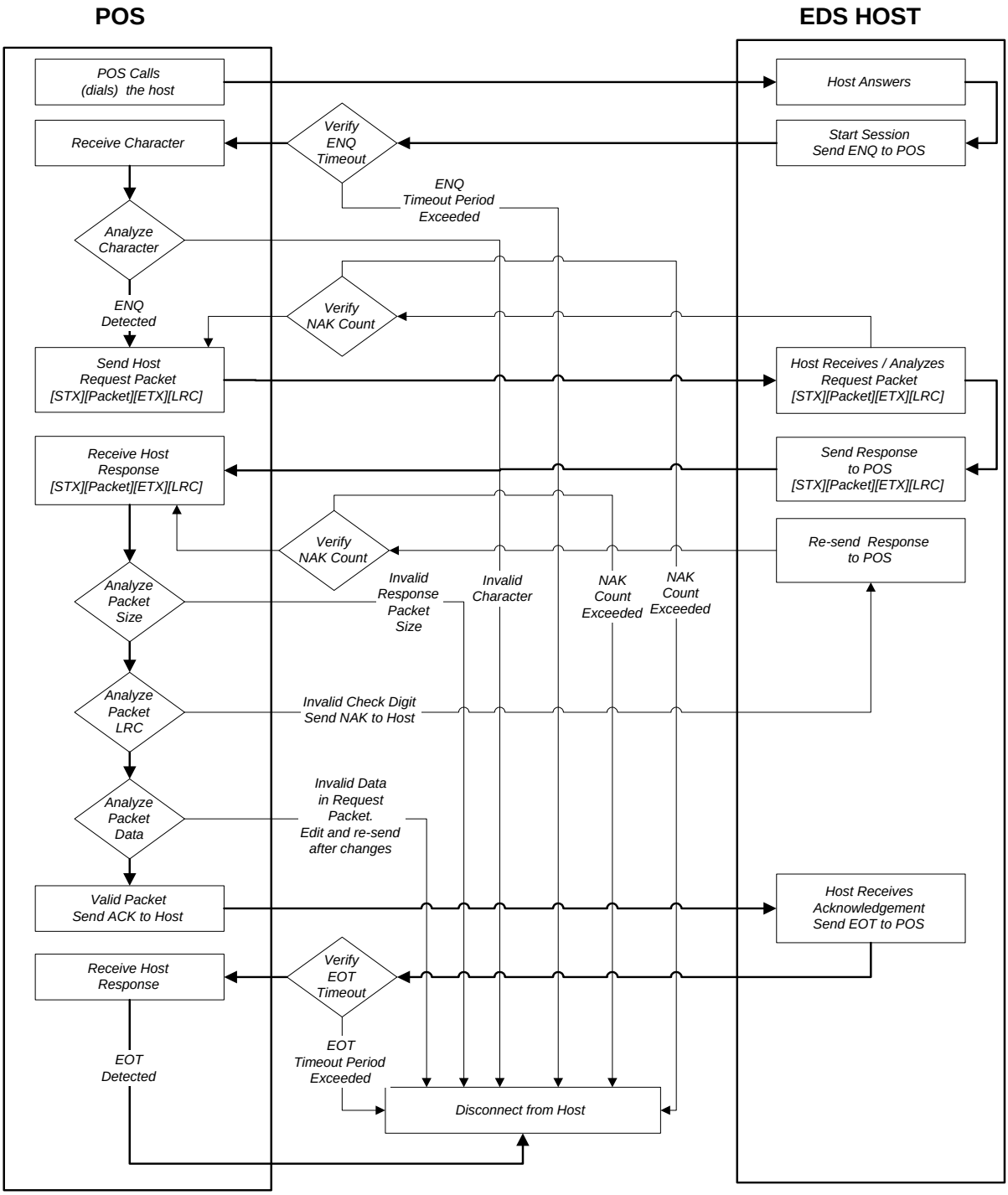
The table below lists the data flows once the telephone call is connected.

Dial-Up Equipment	POS Network
	Sends ENQ to dial-up port. This repeats up to four more times. ENQ = x'05'
Sends STX REQUEST ETX LRC to POS network. STX = x'02' ETX = x'03'	
	Sends ACK to dial-up port. ACK = x'06' / NAK = x'15'
	(CA-MMIS host will process the transaction.)
	Sends STX RESPONSE ETX LRC to dial-up port.
Sends ACK to POS network.	Sends EOT to dial-up port. EOT = x'04'

A session is defined as a single transaction sent to the POS network for processing and a single response sent back to the dial-up port. The call is then disconnected. A second transaction would require that the dial-up equipment initiate a second telephone call to the POS network.

4.3 Dial-Up VISA

This diagram illustrates the dial-up VISA I protocol used to communicate with the EDS Medi-Cal Host through the NetKit Solutions' "Nevada" network controller.



The following is an example of a session connection showing the first part of an ANSI X12 transaction. A “t” indicates a transfer from the network towards the dial-up equipment. An “r” indicates a transfer received by the network from the dial-up equipment.

```
:20:02.706 POS120 t    05     [This is ENQ being sent from the network]
:20:03.474 POS120 r    82     [This is the character “STX”]
:20:03.478 POS120 r    C9     [This is the character “I”]
:20:03.483 POS120 r    53     [This is the character “S”]
:20:03.488 POS120 r    41     [This is the character “A”]
:20:03.491 POS120 r    AA     [This is the character “*”]
:20:03.498 POS120 r    30     [This is the character “zero”]
:20:03.504 POS120 r    30     [This is the character “zero”]
:20:03.508 POS120 r    AA     [This is the character “*”]
:20:03.514 POS120 r    A0
:20:03.554 POS120 r    A0
:20:03.558 POS120 r    AA

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:20:04.860 POS120 r    B1
:20:04.863 POS120 r    AA
:20:04.868 POS120 r    30
:20:04.871 POS120 r    30
:20:04.878 POS120 r    30
:20:04.882 POS120 r    30
:20:04.884 POS120 r    30
:20:04.888 POS120 r    30
:20:04.893 POS120 r    30
:20:04.897 POS120 r    30
:20:04.901 POS120 r    B1
:20:04.904 POS120 r    8D
:20:04.910 POS120 r    03
:20:04.913 POS120 r    14
```

Table 6 - Communication Session Values

Parameter	Value	Interpretation
Frame size	4096 bytes	This field defines the maximum frame size that may be transmitted between the network equipment and the dial-up equipment.
EFTRSPTO	10 seconds	Specifies how long the modem port concentrator (Nevada) will wait for the host to respond to a request. If the modem port concentrator has not received a response back from the host when the timer expires, it clears its data tables of information for this call, effectively preventing a response from returning to the dial-up equipment. The dial-up end should clear the call if a response is not received back within 10 seconds of the first ENQ character.
Mode	8N1	Data bits = 8 Parity = N (None) Stop bits = 1 8th bit ignored
NRETRY	5	Defines how many times the modem port concentrator (Nevada) will retransmit a command to which the dial-up equipment does not respond. The modem port concentrator (Nevada) waits the length of time set by the RETRYTIM parameter after each attempt.
RETRYTIM	40 seconds	Defines the retry interval on protocol exchanges used to establish the call. Defines how long the modem port concentrator (Nevada) waits for a response from the dial-up equipment. The modem port concentrator repeats its attempts to establish the call up to the NRETRY limit, each time waiting the RETRYTIM interval.

Medi-Cal POS network hardware is capable of supporting either 1,200 or 2,400 bits per second (bps) asynchronous dial-up. The network operates in a half-duplex mode and there is no logon required for dial-up access. Security is controlled through host field level validation within the transaction data stream.

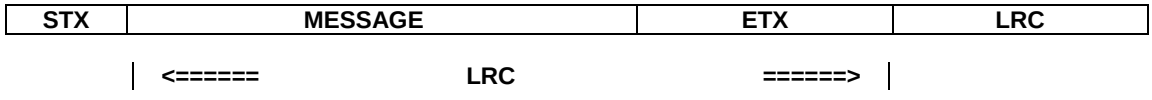
Table 7 - VISA-1 Data Link Control Characters

Character	Binary	Hex	Octal	Description
STX	0000010	02	02	Start-of-text. Precedes a block of text characters. “Text” is that portion of a message treated as an entity to be transmitted to the destination without change.
ETX	0000011	03	03	End-of-text. Used to indicate the end of a block of characters started with an STX. The ETX requires a reply (ACK or NAK) indicating the receiving station’s status.
EOT	0000100	04	04	End-of-transmission. Used to end an information exchange and signal to disconnect.
ENQ	0000101	05	05	Enquiry. An invitation to transmit a message or retransmit the last item. ENQ also is used to bid for the line when using a point-to-point line connection.
ACK	0000110	06	06	Affirmative acknowledgement. Follows the correct reception of a message or command.
NAK	0010101	15	25	Negative acknowledgement. Indicates that the message just received is in error and the receiver is ready to accept a retransmission. NAK is also the “not ready” reply to a line bid.

4.4 Data Link Longitudinal Redundancy Check Calculation

A Longitudinal Redundancy Check (LRC) is required. The LRC character follows each ETX character for each message exchanged. The LRC is comprised of seven data bits and one even parity bit. The seven data bits are generated by the byte wide exclusive OR (modulo 2 summation) of the seven data bits for all message characters, excluding the first STX and including the ETX character. An even parity bit is then generated for the result. If a mismatch is detected between the LRC and the contents of the received message, the POS network hardware responds with an NAK. Communicating systems are encouraged to perform a similar validity check on messages received from the POS network.

WARNING: The LRC generation process will generate all combinations of character codes; therefore, NAK, ACK, ETX, ETB, EOT, STX and others will be generated as valid LRC characters.



Notice the LRC excludes the first STX and includes the ETX character.

Section 5 - Software Validation Process

To connect to the Medi-Cal Point of Service (POS) network, providers and software developers must perform the following software validation process.

1. Contact the POS Help Desk.

To reach the POS Help Desk, call the Telephone Service Center (TSC) at 1-800-541-5555 and select the option for POS/Internet inquiries. The POS Help Desk will assign a unique submitter ID. (If you currently submit claims through Computer Media Claims [CMC], you will not be assigned another submitter ID.) You will need to supply the POS help desk with a four-character version number that is combined with your submitter ID to become the PC/POS version number used in all transactions you submit through the POS network. This number is verified to ensure the software is validated and authorized to submit transactions. Notify the POS/Internet Help Desk of the new four-character version number **prior to testing each new software release/upgrade.**

2. Submit transactions.

When you are ready to test, submit transactions using the pre-defined test cases as described in the *Test Cases* section of the appropriate Medi-Cal transaction vendor companion guide (listed in Section 2). There is a series of tests for each available transaction suite. You may test for any (or all) transaction suites. Your software will only be approved for those transaction suites that have been successfully tested. You will be given a test provider number and Provider Identification Number (PIN) for all non-pharmacy transactions. The pharmacy tests will use the submitter ID and provider number. A test response will be returned for each test case transaction. If the specific key is not found on the test verification file, the following error message will be returned: “ERROR UNABLE TO DETERMINE TEST CASE”.

The POS/Internet Help Desk will receive a comparison report of all your software test transactions from the previous day. If all the fields pass the tests, the POS/Internet Help Desk will update its database allowing your software to be used within the POS network.

All reports and results will be mailed back to the test submitter after review by the POS help desk. If the comparison report data does not adequately describe the test transaction problem, please contact the POS/Internet Help Desk through the TSC at 1-800-541-5555. Select the option for POS/Internet inquiries.

Section 6 - Reference Information

For further information or questions about the standards, visit the following Web sites:

- American National Standards Institute (ANSI)
  Obtain ANSI publications at **http://www.ansi.org**.
- Data Interchange Standards Association, Inc. (DISA)
  Obtain DISA publications at **http://www.disa.org**.
- Washington Publishing Company
  Obtain HIPAA implementation guides at **http://www.wpc-edi.com**.
- National Council for Prescription Drug Programs (NCPDP)
  Obtain NCPDP publications at **http://www.ncpdp.org**.
- VISA Specifications
  Obtain VISA specifications at **http://www.visa.com**.
- Medi-Cal Companion Guides
  Obtain Medi-Cal transaction vendor companion guides at **http://www.medi-cal.ca.gov** (Click the "HIPAA Update" link, then the "ASC X12N Version 4010A1 Companion Guides and NCPDP Technical Specifications" link.)
- IBM CICS Publications
  Obtain IBM CICS publications at **http://www-306.ibm.com/software/htp/cics/library**.

For additional information or answers to questions about this document or leased line connections, contact EDS at the following address:

EDS

ATTN: POS/Internet Help Desk

3215 Prospect Park Drive

Rancho Cordova, CA 95670-6017

To reach the Medi-Cal POS/Internet Help Desk, call the Telephone Service Center (TSC) at 1-800-541-5555 and select the option for POS/Internet inquiries.